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BACTERIAL LEAF SPOT OF BEGONIA

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Bacterial leaf spot is caused by Xanthomonas begoniae (Takimoto) Dowson and considered to be one of the most serious foliar diseases of begonia. Rex begonias are much more susceptible to this disease than tuberous- or fibrous-rooted begonias. High relative humidity and high temperature are generally prevalent in greenhouse culture particularly during the summer months and contribute significantly to the incidence of bacterial leaf spot. Crowded conditions and overhead watering are important factors in spreading the pathogen from plant to plant, rendering a large percentage of the plants unsalable.

SYMPTOMS. The leaf spots are round, dark brown, and visible on both leaf surfaces (Fig. 1). They are found on the interveinal tissue and never on the veins, petioles, or stems. Leaf spots examined with transmitted light show a very narrow transparent zone around the brown necrotic center of the spot. The margins of the leaf spots are characteristically irregular and wavy. The spots gradually enlarge and coalesce so that larger, irregularly shaped necrotic areas are formed. As a result, the surrounding leaf tissue in these areas will often die and turn brown. Severe infection may cause premature abscission of the leaves.

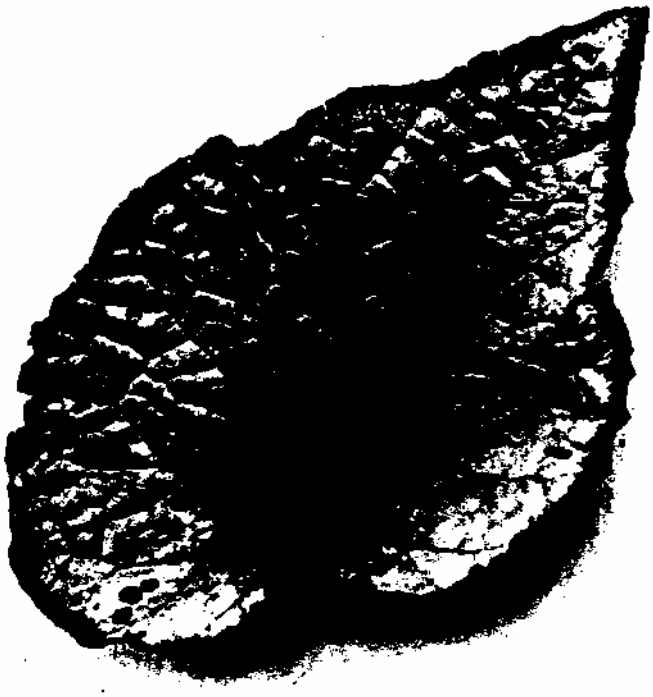

Fig. 1. Bacterial leaf spot on Rex begonia.

CONTROL. As has been stated above, high temperature and humidity favor the development of the disease. To control the disease, greenhouses should be kept well-ventilated and plants should be so spaced that the pathogen is not spread from diseased to healthy plants.

Direct control of the disease by applying bactericides should be kept at a minimum on plants ready for market so as not to detract from the appearance of the leaves with unsightly spray residue. In the rooting beds, however, spraying with bactericides would not present a problem and regular applications of maneb (1 1/2 lb) plus tribasic copper sulfate (4 lb) in 100 gal water, to which a wetting agent has been added, will protect the cuttings from becoming diseased.

References

1. Ark, P. A. and C. M. Tompkins. 1939. Bacteriosis of tuberous begonias. Phytopathology 29:633-637.
2. Forsberg, *J.* L. 1963. Diseases of ornamental plants. Univ. of Illinois Coll. of Agr. Special Publication No. 3.
3. McCulloch, L. 1937. Bacterial leaf spot of begonia. *J.* Agr. Res. 54:583-590.